

1. An isolated nucleic acid encoding a Progression Suppressed Gene 13 (PSGen 13) protein.

3. The isolated nucleic acid of claim 1, wherein the nucleic acid comprises the polynucleotide sequence shown in SEQ ID NO:1.

4. The isolated nucleic acid of claim 1, wherein the nucleic acid comprises the polynucleotide sequence shown in SEQ ID NO:2.

5. The isolated nucleic acid of claim 1, wherein the nucleic acid consists essentially of the polynucleotide sequence shown in SEQ ID NO:1.

6. The isolated nucleic acid of claim 1, wherein the nucleic acid consists essentially of the polynucleotide sequence shown in SEQ ID NO:2.

7. The isolated nucleic acid of claim 1, wherein the nucleic acid consists of the polynucleotide sequence shown in SEQ ID NO:1.

8. The isolated nucleic acid of claim 1, wherein the nucleic acid consists of the polynucleotide sequence shown in SEQ ID NO:2.

9. A vector comprising the nucleic acid of any one of claims

35

SUB
B2

~~1 to 8.~~

10. A host cell comprising the vector of claim 9.

11. The host cell of claim 10, wherein the host cell is a tumor cell.

12. The host cell of claim 11, wherein the tumor cell is a nasopharyngeal tumor cell, a thyroid tumor cell, a central nervous system tumor cell, a melanoma cell, an epithelial tumor cell, a non-epithelial tumor cell, a blood tumor cell, a leukemia cell, a lymphoma cell, a neuroblastoma cell, a cervical cancer cell, a breast cancer cell, a lung cancer cell, a prostate cancer cell, a colon cancer cell or a glioblastoma multiforme cell.

13. A method for treating cancer in a subject which comprises contacting a cell of the subject with a nucleic acid encoding a Progression Suppressed Gene 13 Protein (PSGen 13) in a sufficient amount so as to cause the cell to express the PSGen 13 protein, thereby treating cancer in the subject.

14. The method of claim 13, wherein the cell is a tumor cell.

15. The method of claim 14, wherein the tumor cell is a nasopharyngeal tumor cell, a thyroid tumor cell, a central nervous system tumor cell, a melanoma cell, an epithelial tumor cell, a non-epithelial tumor cell, a blood tumor cell, a leukemia cell, a lymphoma cell, melanoma cell, a neuroblastoma cell, a cervical cancer cell, a breast cancer cell, a lung cancer cell, a prostate cancer cell, a colon cancer cell or a glioblastoma multiforme cell.

16. The method of claim 13, wherein the subject is suffering from a form of cancer.

17. The method of claim 16, wherein the form of cancer is melanoma, neuroblastoma, astrocytoma, glioblastoma multiforme, cervical cancer, breast cancer, colon cancer, prostate cancer, osteosarcoma, chondrosarcoma, a nasopharyngeal tumor, a thyroid tumor, a central nervous system tumor, a melanoma, an epithelial tumor, a non-epithelial tumor, a blood tumor, a leukemia, a lymphoma.
18. The method of claim 13, wherein the contacting is by way of topical application, administration to the subject, injection, electroporation, liposome application, viral-mediated contact, contacting the cell with the nucleic acid, or coculturing the cell with the nucleic acid.
19. The method of claim 18, wherein the contacting is carried out via injection, oral administration, topical administration, adenovirus infection, viral-mediated infection, liposome-mediated transfer, topical application to the cells of the subject, or microinjection.
20. The method of claim 13, wherein the subject is a mammal.
21. The method of claim 20, wherein the mammal is a human.
22. An isolated Progression Suppressed Gene 13 (PSGen 13) protein.
23. The protein of claim 22, wherein the protein is a human protein, a rat protein, a bovine protein, a mouse protein, or a primate protein.
24. The protein of claim 22, wherein the protein has a polypeptide sequence which is encoded by the polynucleotide sequence of SEQ ID NO:1.

25. The protein of claim 22, wherein the protein has a polypeptide sequence which is encoded by the polynucleotide sequence of SEQ ID NO:2.

5 26. An antibody which binds specifically to the protein of any one of claims 22 to 25.

27. The antibody of claim 26, wherein the antibody is a polyclonal antibody or a monoclonal antibody.

10

28. The antibody of claim 26, wherein the antibody is a human antibody, a murine antibody, a primate antibody, a bovine antibody, a sheep antibody or a rat antibody.

15

29. The antibody of claim 26, wherein the antibody is a human monoclonal antibody, a humanized murine monoclonal antibody, a humanized primate monoclonal antibody, or a humanized rat monoclonal antibody.

20

30. A composition which comprises any one of the nucleic acids of claims 1 to 8 and a carrier.

sub
2

31. The composition of claim 30, wherein the composition is a pharmaceutical composition.

25

32. A composition which comprises any one of the proteins of claims 22 to 25 and a carrier.

30

33. The composition of claim 32, wherein the composition is a pharmaceutical composition.

34. A composition which comprises the antibody of claim 26 and a carrier.

35

35. The composition of claim 34, wherein the composition is a pharmaceutical composition.

36. A method for inhibiting growth of a cancer cell which comprises contacting the cancer cell with a pharmaceutical composition comprising a nucleic acid encoding a PSGen 13 protein, a PSGen 13 protein or a PSGen 13 activator compound in a sufficient amount so as to inhibit growth of the cancer cell.

37. The method of claim 36, wherein the PSGen 13 activator compound comprises a transcription factor which specifically activates expression of a PSGen 13 gene, an agent which prolongs PSGen 13 protein half-life in the cell, or a compound which stabilizes PSGen 13 mRNA in the cell so as to increase translation of PSGen 13 protein in the cell.

38. The method of claim 36, wherein the contacting is by way of topical application, injection, electroporation, liposome application, or coculturing the cell with the nucleic acid.

39. The method of claim 36, wherein the cancer cell is a nasopharyngeal tumor cell, a thyroid tumor cell, a central nervous system tumor cell, a melanoma cell, an epithelial tumor cell, a non-epithelial tumor cell, a blood tumor cell, a leukemia cell, a lymphoma cell, a melanoma cell, a neuroblastoma cell, a cervical cancer cell, a breast cancer cell, a lung cancer cell, a prostate cancer cell, a colon cancer cell or a glioblastoma multiforme cell.

40. A method for inhibiting angiogenesis associated with tumor growth in a subject which comprises administering to the subject a pharmaceutical composition comprising a nucleic acid encoding a PSGen 13 protein, a PSGen 13 protein or a PSGen 13 activator compound in a sufficient amount so as to inhibit angiogenesis associated with tumor growth in the subject.

41. The method of claim 40, wherein the subject is a mammal.

42. The method of claim 41, wherein the mammal is a human.

43. The method of claim 40, wherein the subject is suffering from melanoma, neuroblastoma, astrocytoma, glioblastoma multiforme, cervical cancer, breast cancer, colon cancer, prostate cancer, osteosarcoma, chondrosarcoma, a nasopharyngeal tumor, a thyroid tumor, a central nervous system tumor, a melanoma, an epithelial tumor, a non-epithelial tumor, a blood tumor, a leukemia, or a lymphoma.

ALL
AI

005280 OF 289600